

# METHOD FOR FABRICATING A BOTTLE-SHAPED DEEP TRENCH

## Abstract

A method for fabricating a bottle-shaped deep trench. The method comprises providing a substrate having a pad layer thereon, etching the pad layer and the substrate to form a deep trench in the substrate, performing an ALD process to form a nonmetal layer on the pad layer and on an upper portion of the sidewall of the deep trench, and performing an isotropic etching process to the sidewall and the bottom surface of the deep trench by taking the nonmetal layer as a hard mask so as to form a bottle-shaped deep trench.